## Michigan



For a copy of the Michigan 1996 305(b) report, contact:

#### John Wuycheck

Michigan Department of Natural Resources Surface Water Quality Division P.O. Box 30028 Lansing, MI 48909-7528 (517) 335-3307 e-mail: wuycheck@state.mi.us

The report is also available on the Internet at:

ftp://ftp.deq.state.mi.us/pub/swq/ 305brepf.doc

### **Surface Water Quality**

Ninety-eight percent of Michigan's surveyed river miles and 95% of Michigan's surveyed lake acres fully support aquatic life uses. Swimming use is also fully supported in 98% of the surveyed rivers and 99% of the surveyed lake acres. Priority organic chemicals (in fish) are the major cause of nonsupport in more river miles than any other pollutant, followed by bacteria, siltation and sedimentation, and metals. Leading sources of pollution in Michigan include unspecified nonpoint sources, agriculture, contaminated sediments, municipal and industrial

discharges, combined sewers, and atmospheric deposition.

Very few lakes in Michigan completely fail to support fishing and swimming, but there is no doubt that both point and nonpoint sources have increased the rate of eutrophication (overenrichment), altered biological communities, and degraded the overall aesthetic and recreational quality of a great number of Michigan's fragile lake resources. Many more lakes are threatened by long-term, cumulative pollutant loads, especially in the rapidly growing communities on northern lower Michigan.

Four of the five Great Lakes border Michigan. The open waters of Lakes Superior, Michigan, and Huron have good quality. Poor water quality is restricted to a few degraded locations near shore. Lake Erie's water quality has improved dramatically in the last two decades. Once declared dead, Lake Erie now supports the largest walleye sport fishery on the Great Lakes. The dramatic improvements are due primarily to nutrient controls applied to sewage treatment plants, particularly in the Detroit area.

#### **Ground Water Quality**

Most of the ground water resource is of excellent quality, but certain aquifers have been contaminated with toxic materials leaking from waste disposal sites, businesses, or government facilities. The Michigan Ground Water Protection Strategy and Implementation Plan identifies specific program initiatives, schedules, and agency responsibilities for protecting the State's ground water resources.

## Programs to Restore Water Quality

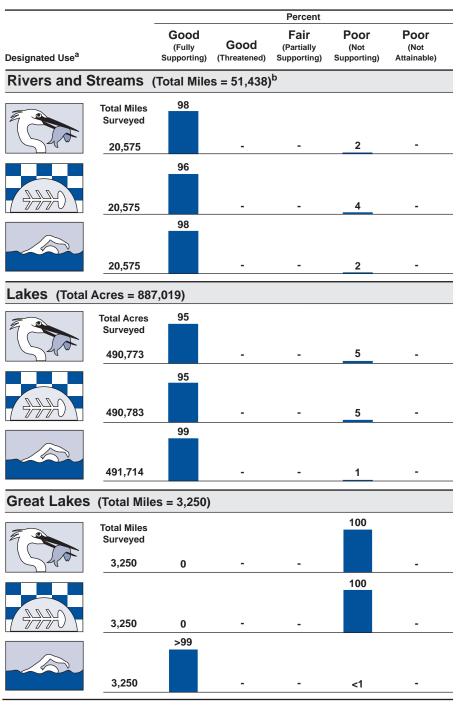
Major point source reductions in phosphorus and organic material loads have reduced or eliminated water quality problems in many Michigan waters. However, expanded efforts are needed to control nonpoint source pollution, eliminate combined sewer overflows, and reduce toxic contamination. Michigan has implemented an industrial pretreatment program, promulgated rules on the discharge of toxic substances, and regulated hazardous waste disposal facilities, but many toxicity problems are due to past activities that contaminated sediments.

# Programs to Assess Water Quality

Between 1990 and 1996, the Department of Natural Resources devoted a significant amount of staff time to documenting water quality impacts from nonpoint sources of pollution and verifying information in the Michigan Nonpoint Source Assessment. Chemical, biological, and physical surveys were conducted to identify water quality standards violations and degraded biological communities in numerous watersheds.

- Not reported in a quantifiable format or unknown.
- <sup>a</sup> A subset of Michigan's designated uses appear in this figure. Refer to the State's 305(b) report for a full description of the State's uses.
- <sup>b</sup>Includes nonperennial streams that dry up and do not flow all year.

#### Individual Use Support in Michigan



Note: Figures may not add to 100% due to rounding.